

reason or another, they were forced to lower elevations and encountered northerly winds, so that, unless they landed, they were in danger of being carried in a southerly direction. Others, in starting, apparently chose to drift with the northerly winds prevailing below 1,000 meters and were carried south-southwestward from Milwaukee. Mr. H. E. Honeywell, of St. Louis, Mo., an independent pilot, and Lieut. W. F. Reed, of Mobile, Ala., representing the Navy, the winners of second and third places, respectively, landed in southern Missouri, covering a distance of between 500 and 600 miles.—*E. H. Haines.*

NEW ORLEANS FORECAST DISTRICT.

Small-craft warnings were displayed on the Texas coast on the 1st, 8th, 9th, and 10th, being changed to southeast storm warnings on the 1st at 3 p. m. These warnings were justified. Thunderstorms on the east coast of Texas were attended by gales for a brief period, about 8:30 a. m. on the 15th, for which no warnings were displayed.

A disturbance of moderate intensity near the eastern and middle Gulf coasts prevailed from the 25th to the 31st. It was sufficiently intense to warrant the display of northeast storm warnings during the night of the 28th and the following day and night. Warnings were displayed accordingly on the Louisiana coast.

Warning of frost in the Texas Panhandle and extreme northwestern Oklahoma was issued on the 11th.—*R. A. Dyke.*

DENVER FORECAST DISTRICT.

An area of low pressure which began to develop over the southern Rocky Mountain Plateau on the 6th and another disturbance which appeared over British Columbia and Alberta on the same date formed, during the 7th, a trough which extended from the two Canadian Provinces already mentioned southward to northwestern Mexico. On the morning of the 10th the same storm was central over western Colorado, whence it moved slowly northeastward, reaching Manitoba during the 12th. Precipitation occurred in every portion of this district, except southern New Mexico, at some time during the period from the 7th to the 11th, with heavy snows in southwestern Colorado, northern Arizona, and southern Utah on the 9th and 10th. Freezing temperatures followed the disturbance on the 9th in southern Utah and northern Arizona, on the 10th in southwestern Colorado, and on the 11th in extreme north-central and northwestern New Mexico. Night temperatures below freezing continued in most of this area until the morning of the 13th. The passage of the storm center was also attended by gales in Colorado and New Mexico on the 10th, which continued in northeastern Colorado on the 11th. The cold weather and rain and snow were unfavorable for live stock, especially newly shorn sheep and lambs, although there appears to have been but little loss. On the morning of the 12th the temperature was decidedly below freezing in the Gunnison Valley fruit district, reaching 25° at Hotchkiss, but no serious injury to the fruit appears to have been caused by these conditions.

Showers also fell in all except the extreme southwestern portion of the district on the 14th–15th, followed on the 16th by temperatures below freezing in the western valleys of Colorado, due to an area of high pressure which extended from the north Pacific coast south-

eastward to the Panhandle of Texas on the morning of that date. The fruit, however, again escaped injury.

A number of LOWs that moved across the Rocky Mountain region during the latter half of the month were attended by occasional showers in Colorado and Utah, and generally showery conditions on the eastern slopes of Colorado and New Mexico during the last three days accompanied a moderate LOW which occupied most of the southern plateau region, with its center over Arizona.

Frost warnings were issued as follows: For eastern Colorado on the 10th, 11th, and 13th; east of the mountains in New Mexico on the 11th; north-central and northwestern New Mexico on the 13th and 21st; north and west Utah on the 1st and 8th; north Utah on the 10th, 11th, and 26th; and for all of Utah on the 12th. These warnings were generally verified either by the occurrence of frost or temperatures at which frost might be expected.

Light frosts for which no warnings were issued occurred at Grand Junction on the 2d, Modena on the 14th and 21st, and Denver on the 16th.

Freezing temperatures were forecast as follows: At the higher elevations of southern Utah on the 2d and 26th; all of Utah on the 9th; southern Utah on the 10th and 11th; the western valleys of Colorado on the 10th, 11th, 12th, 13th, and 16th; north-central and northwestern New Mexico on the 10th, 11th, and 12th; and at the higher elevations of northern Arizona on the 26th. The forecasts, as a rule, were justified, except in northern Utah on the 10th.

A warning of frost and freezing temperature if the weather cleared was also issued for the western fruit valleys of Colorado on the evening of the 8th, when the conditions were especially critical. Continued cloudy weather and the development of a secondary storm over southern Utah prevented a fall in temperature to a dangerous degree.—*J. M. Sherier.*

SAN FRANCISCO FORECAST DISTRICT.

The Aleutian center of activity was in evidence the greater portion of the month. It sent out no less than six offshoots that affected the weather in the northern portion of this district. The permanent North Pacific HIGH sent out four offshoots that had a more or less marked influence on the weather in the Pacific States.

The LOW on the 7th from Alaska united with a disturbance that streamed northward from Arizona, and it caused quite general rains in California and the North Pacific States.

On the 17th another LOW moved north from Arizona and apparently united with one from the Northwest on the 20th. Considerable rain fell during this period, and a live-stock warning was issued on the 18th for eastern Oregon, eastern Washington, Idaho, and northern Nevada. It was not so windy nor were the rains so cold as expected; therefore this warning was only partly verified.

Another trough-shaped depression formed over California and the region between the Cascades and Rocky Mountains on the 24th. The next morning it presented such features as to call for a live-stock warning in Idaho, which was issued and was fully verified.

The North Pacific HIGH about the 15th receded from off the California coast, which caused a relatively low barometer and unsettled weather to prevail for several days in California and over the ocean to the westward. This unsettled condition culminated in general rains in